WHAT IS CLAIMED IS:

1. A hydrogen station comprising;

a water electrolyzer for producing hydrogen containing moisture,

a first dewatering device capable of capturing the moisture from the hydrogen to provide hydrogen in a dry state,

a tank for storage of the hydrogen in the dry state,

a second dewatering device adapted to replace said first dewatering device when the function of the first dewatering device has been declined with an increase in amount of moisture captured,

and regenerating equipment for regenerating said first dewatering device after being replaced, thereby recovering the water-capturing ability thereof,

wherein said regenerating equipment heats said first dewatering device to evaporate the captured moisture, permits the regenerating hydrogen in the dry state to flow into said first dewatering device and permits regenerating hydrogen containing the moisture to flow out of said first dewatering device, and removes the moisture from said regenerating hydrogen to provide regenerating hydrogen in a dry state.

2. A hydrogen station according to claim 1, further comprising a photovoltaic generator that supplies power to said water electrolyzer.

3. A hydrogen station according to claim 1, wherein said regenerating equipment comprises an electric heater for the dewatering device, a hydrogen-circulating device for passing the regenerating hydrogen through said first dewatering device, and a condenser mounted in said hydrogen-circulating device.

4. A hydrogen station according to claim 2, wherein said regenerating equipment comprises an electric heater for the dewatering device, a hydrogen-circulating device for passing the regenerating hydrogen through said first dewatering device, and a condenser mounted in said hydrogen-circulating device.

5. A hydrogen station according to claim 1, wherein the photovoltaic generator is a power supply for said regenerating equipment.

6. A hydrogen station according to claim 2, wherein the photovoltaic generator is a power supply for said regenerating equipment.

7. A hydrogen station according to claim 3, wherein the photovoltaic generator is a power supply for said regenerating equipment.

8. A hydrogen station according to claim 4, wherein the photovoltaic generator is a power supply for said regenerating equipment.

9. A hydrogen station according to claim 1, wherein said tank contains a hydrogen-absorption material.

10. A hydrogen station according to claim 2, wherein said tank contains a hydrogen-absorption material.

11. A hydrogen station according to claim 3, wherein said tank contains a hydrogen-absorption material.

12. A hydrogen station according to claim 4, wherein said tank contains a hydrogen-absorption material.

13. A hydrogen station according to claim 5, wherein said tank contains a hydrogen-absorption material.

14. A hydrogen station according to claim 6, wherein said tank contains a hydrogen-absorption material.

15. A hydrogen station according to claim 7, wherein said tank contains a hydrogen-absorption material.

16. A hydrogen station according to claim 8, wherein said tank contains a hydrogen-absorption material.

17. A hydrogen station according to claim 1, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

18. A hydrogen station according to claim 2, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

19. A hydrogen station according to claim 3, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

20. A hydrogen station according to claim 4, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

21. A hydrogen station according to claim 5, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

22. A hydrogen station according to claim 6, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

23. A hydrogen station according to claim 7, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

24. A hydrogen station according to claim 8, wherein said tank is designed to be pressure-proof in order to store compressed hydrogen.

25. A process for operating a hydrogen station comprising a photovoltaic generator,

an external power supply,

a water electrolyzer that produces hydrogen containing moisture with electric power supplied from said photovoltaic generator,

a plurality of dewatering devices that capture moisture from said hydrogen to provide hydrogen in a dry state,

a tank for storage of said hydrogen in the dry state,

and regenerating equipment adapted so that one of electric power from said photovoltaic generator or both electric power from said photovoltaic generator and electric power from said external power supply is supplied to the regenerating equipment, when the

function of said dewatering device has been reduced with an increase in amount of moisture captured, thereby regenerating said dewatering device to recover the water-capturing ability thereof,

wherein said process comprises a step of estimating a power-generating time and an amount of electric power generated in said photovoltaic generator, whereby when the water electrolysis and the regeneration of the dewatering device is carried out in parallel to each other by use of electric power from said photovoltaic generator, they are carried out, or when neither of the water electrolysis nor the regeneration of the dewatering device is carried out by use of electric power from said photovoltaic generator, if there is not at least one dewatering device having the water-capturing ability, the regeneration of at least one dewatering device required to be regenerated is carried out using both electric power from said photovoltaic generator and electric power from said external power source in combination.

26. A process for operating a hydrogen station according to claim 25, wherein average insolation amount and insolation time per day in the past are used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

27. A process for operating a hydrogen station according to claim 25, wherein a weather forecast is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

28. A process for operating a hydrogen station according to claim 26, wherein a weather forecast is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

29. A process for operating a hydrogen station according to claim 25, wherein information from an atmospheric pressure sensor is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

30. A process for operating a hydrogen station according to claim 26, wherein information from an atmospheric pressure sensor is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

31. A process for operating a hydrogen station according to claim 27, wherein information from an atmospheric pressure sensor is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.

32. A process for operating a hydrogen station according to claim 28, wherein information from an atmospheric pressure sensor is used as estimating data to estimate the power-generating time and the amount of electric power generated in said photovoltaic generator.